

Meriwether Lewis to Thomas Jefferson, October 3, 1803, from Thomas Jefferson and Early Western Explorers, Transcribed and Edited by Gerard W. Gawalt, Manuscript Division, Library of Congress

Meriwether Lewis to Thomas Jefferson

Cincinnati, October 3rd 1803.

Dear Sir,

I reached this place on the 28th Ult.; it being necessary to take in a further supply of provisions here, and finding my men much fatigued with the labour to which they have been subjected in descending the river, I determined to recruit them by giving them a short respite of a few days, having now obtained the distance of five hundred miles. On the evening of the 1st inst. I again dispatched my boat with orders to meet me at the Big Bone lick, to which place I shall pass by land, it being distant from hence only seventeen miles while by water it is fifty three, a distance that will require my boat in the present state of the water near three days to attain.

The late reserches of Dr. William Goforth of this plase at that Lick has made it a place of more interesting enquiry than formerly, I shall therefore seize the present moment to visit it, and set out early tomorrow morning for that purpose.

Dr. Goforth in the begining of May last with a view to obtain a complete skelton of the Mammoth, sunk a pitt 30 feet square and eleven feet in debth in a moist part of the Big Bone Lick, from which he obtained a large number of specimens of the bones of this animal, tho' generally in a very imperfect and mutilated state; he also obtained from the

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same pitt several grinders of the anamal generally supposed to be an Elephant from their affinity to the teeth of that anamal, these last are very perfect: a part of this collection of bones the Dr. has in his possession at this place

and has been so obliging as to favour me with an examination of them; the other part of the Dr.'s collection is yet at the Lick, these he informs me are much more perfect than those he shewed me, particularly the upper portion of a head, and some other specimens which had been obtained from a small pitt, sunk in a dryer part of the Lick by a young man to whom, in his absence he had confided the prosecution of his researches; among these specimens the Dr. also mentioned a tusk of an immense size, the dementions of which he could not furnish me with, not having yet seen it, but from the information of his assistant, states it's weight at 180 lbs.; this tusk is said to be in a good state of preservation. The Dr. informed me that he had been interdicted by the Agent of Mr. David Ross of Virginia, (the proprietor of the Lick) from removing these bones, as he was also from the further prosecution of his researches; he is much chagrined at this occurrence, and seems very anxious that some measure should be taken by which to induce Mr. Ross to suffer him to prosecute his enquiries. The Doctr. presented me with two handsome specimens, the one a grinder of the Elephant, the other, that of the Mammoth, the former weighs ten and $\frac{1}{2}$ pounds, the latter I have not weighed, from the circumstance of it's roots being attached to a lump of clay, without seperating from which, it's weight could not be accurately ascertained; I concluded it would be better to forward it in it's present state, as the clay will not only guard this part of the tooth from injury in transporting it, but will at the same time furnish a good specimen of the earth of which the lick is formed. Dr. Goforth was so good as to grant me

his permission to take from those bones now at the Lick the large tuck before noticed, and any other bones that are to be found among his collection at that place: Capt. Findley who accompanys me to the Lick says he is well acquainted with the Agent of Mr. Ross, and thinks that he can obtain his permission also for the same purpose; should I succeed you may expect to recieve through Mr. Trist, this large tusk together with the two grinders

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before mentioned, and such other specimens as I may be enabled to procure, and which, I may think worthy your acceptance.

All the bones, which I observed in the possession of Dr. Goforth appear to be those of the Mammoth, except only the Elephant-like grinders; the most remarkable among them was a portion of the lower or larger part of a tusk; measuring one foot ten inches in circumference and five feet eight inches in length, the Dr. informed me when he first obtained it, it was upwards of six feet in length and weighed one hundred pounds; the greatest circumference of the tusks of Mr. Peale's skeleton I believe is not more than one foot six $\frac{1}{2}$ inches. As the anatomy of the Mammoth has already been so well ascertained by the skeleton in the possession of Mr. Peale (the upper portion of the head excepted) I confined my enquiries nearly to a search for this part of the skeleton, and for such specimens of the tusks as would enable me to decide a question which appears not yet fully to have been satisfied (viz) Whether the fluted or sythe-shaped tusks so frequently found in the same bed with the acknowledged tusks of the Mammoth, are the tusks of that animal, or a different one?

With regard to the first of these enquiries I was unsuccessful, finding only one mutilated specimen of the upper portion of the head, the frontal bone of which had entirely decayed; I was therefore unable to form any just idea of its shape; as to the second, I was more fortunate, obtaining many specimens of both the acknowledged Mammoth tusks, as well as those of the flat tusks, both in a sound and an imperfect state; these I compared with attention; but before I proceed to express an opinion with respect to the homogeneity of these tusks I will give a short description of those specimens, in order Sir, that you make from thence draw your own inferences, and make your own deduction.

The tusks of the Mammoth were conical, much curved, and also spiral or twisted; the fragments of whatever portion of the tusk were homologous to the same part of a complete tusk; when by decay the end of a section of any large part of the tusk was observed, th

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ends of the broken lateral stratas of the lamina, formed a number of circular rings, each imbracing and inclosing the other from the center to the circumference of the tusk, these rings however were of unequal thickness; when perfect the lamina assumes a yellowish white or cream colour and consistence (see No. 2. specn. inclosed); the surface of the tusk sometimes assumes partially a black colour, which from its resemblance to the Buffalo

horn might on a slight examination be taken for a similar substance, but on a more minute investigation it appears to be ivory, or the common lamina of the tusk, which, has acquired that colour from some cause, most probably, from the properties of the clay in which they had been so long deposited; this black Ivory (No. 2) is rarely more than two lines in thickness, gradually losing its hue inwards, until it becomes the common colour of the tusk.

The flat or sythe-like tusks assumed a great variety of figures, though uniformly curved; one was flat on both sides near the large end of the tusk, where it was connected with the head; this was rendered conspicuous from the conic concavity common to this part as well of the Mammoth, as these tusks at the larger end; and so much was it stated, that this end of the tusk was left in a forked shape, while the smaller end assumed the curved, and conic shape, and was also spiral, as is that of the Mammoth: several were slated unequally on both sides near the small extremity of the tusk, the larger end being conical, curved, and spiral; while others were flat on one side only throughout the whole extent of the tusk: the lamina of these tusks whether perfect, decayed, or assuming the horn-like appearance, is the same substance precisely of the Mammoth tusk: in every instance where the tusk is flattened, the circular rings of lamina are perfect when the diameter of those rings do not exceed the thickness of the tusk, which last I found unequal in the different specimens; and when the rings of

lamina exceed the thickness of the tusk they are broken, but still we find the corresponding parts of these broken rings, attached to either side of the perfect one, and succeeding

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each other throughout the whole width of the tusk; thus presenting the exact figure of the Mammoth's tusk reduced to a flat surface on both sides by being grownd down.

I also observed that several bones that were in a good state of preservation, appeared to have been woarn away in the same manner, or from the same cuase which had flattened the tusks, particularly a large grinder of the Mammoth which struck my attention, it was unconnected with the jaw bone; one third of the volume of this tooth seemed to have been woarn away, as if reduced on one side by being grown down to a plane surface; th enamel with the bone of the tooth and presented a smooth surface; no part of this tooth shewed any sharp fracture which, might induce a belief that it was reduced to it's prsent shape by a violent or sudden stroke.

Finding that the upper part of the tusk was flattened, which shape it could not have acquired during the existance of the living anamal, it being that part of the tusk which by bone or cartilage must have been united with the head; that in every case where the same specimen united both the character of the Mammoth and flat tusk, that portion resembling the Mammoth tusk was in all respects it's prototipe; that the tusk of the Mammoth is well defined, and that it's characteristics strongly mark it; that

the lamina of both the flat and the conic tusks, are invariably the same in similar states of preservation; and that in all instances where the tusk is flattened the lateral laimina shews evedent marks of violence; I can therefore have no remaining doubt of these flat or sythe-like tusks being the tusks of the Mammoth; and from the appearance of the flatten grinder of the Mammoth before noticed, I am strongly disposed to believe that these flat tusks of the Mammoth have acquired that shape in consequence of the sand and gravel passing over them for a great length of time caused by a runing stream or agitated water.

The Elephants teeth which I saw in the possession of Dr. Goforth weigh from four to eleven pounds, and appear to me precisely to resemble a specimen of these teeth which, I saw in the possession of Dr. Wister of Philadelphia; and which if my recollection serves

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me Dr. Wister informed me was found in S. Carolina: the Dr. has since assured me, that from a comparison of this specimen with the plates representing the teeth of the Asiatic Elephat contained in the late Vols. of the British philosophical transactions, that he is perfectly convinced that it is the tooth of the Asiatic Elephant or an animal very much resembling it. Relative to these teeth it may not be unworthy of remark, that so far as I have been able to inform myself, they are never found adjacent to the bones of any animal of their comparative size, except those of the Mammoth; or such as from their affinity to the anatomy of that animal, have always been admitted to be the bones of the Mammoth. These teeth are never found attached to the bones of the jaw; and notwithstanding the high state of preservation in

which those Elephant's teeth are found, that no other part of it's frame should yet have been discovered in America. From the shape and termination of both extremities of these grinders they each appear to have completely filled it's respective jaw bone.

Not any of the bones or tusks which I saw were petrified, either preserving their primitive states of bone or ivory; or when decayed, the former desolving into earth intermixed with scales of the harder or more indissoluble parts of the bone, while the latter assumed the appearance of pure white chalk.

I would thank you for forwarding me some of the Vaccine matter, as I have reason to believe from several experiments made with what I have, that it has lost it's virtue.

Conner, the interpreter I had calculated on engaging, has declined; however I do not feel much disappointment at this occurrence, being well assured that a suitable person of that description can be procured at St. Louis.

So soon Sir, as you deem it expedient to promulge the late treaty, between the United States and France I would be much obliged by your directing an official copy of it to be furnished me, as I think it probable that the present inhabitants of Louisiana, from such an evidence of their having become the Citizens of the United States, would feel

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it their interest and would more readily yeald any information of which, they may be possessed relative to the country than they would be disposed to do, while there is any doubt remaining on that subject.

As this Session of Congress has commenced earlyer than usual, and as from a variety of incidental circumstances my progress has been unexpectedly delayed, and feeling as I do in the most anxious manner a wish to keep them in good humour on the subject of the expedition in which I am engaged, I have concluded to make a tour this winter on horseback of some hundred miles through the most interesting portion of the country adjoining my winter establishment; perhaps it may be up the Canceze River and towards Santafee, at all events it will bee on the South side of the Missouri. Should I find that Mr. Clark can with propriety also leave the party, I will prevail on him also to undertake a similar excurtion through some other portion of the country: by this means I hope and am persuaded that by the middle of February or 1st of March I shall be enabled to procure and forward to you such information relative to that Country, which, if it dose not produce a conviction of the utility of this project, will at least procure the further toleration of the expedition.

It will be better to forward all letters and papers for me in future to Cahokia.

The water still continues lower in the Ohio that it was ever known. I am with every sentiment of gratitude and respect Your Obt. Servt.

Meriwether Lewis. Capt.

1st. U.S. Regt. Infy.

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